ABSTRACT

The present invention provides a chemicallymodified protein prepared by binding polyethylene glycol to
a polypeptide characterized by being the product of
expression by a host cell of an exogenous DNA sequence and
substantially having the following amino acid sequence:

(Het)n

Thr Pro Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys Cys Leu Glu Gln Val Arg Lys Ile Gin Giy Asp Gly Ala Ala Leu Gin Glu Lys Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val Leu Leu Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys Pro Ser Gin Ala Leu Gin Leu Ala Gly Cys Leu Ser Gin Leu His Ser Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gin Ala Leu Giu Gly Ile Ser Pro Giu Leu Gly Pro Thr Leu Asp Thr Leu Gin Leu Asp Val Ala Asp Phe Ala Thr Thr Ile Trp Gin Gin Het Glu Glu Leu Gly Het Ala Pro Ala Leu Gln Pro Thr Gin Gly Ala Het Pro Ala Phe Ala Ser Ala Phe Gin Arg Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe Leu Glu Val Scr Tyr Arg Val Leu Arg His Leu Ala Gln Pro

(n=0 or 1)

The chemically-modified protein according to the pres nt invention has a neutrophils-increasing activity much more lasted than that of the intact human G-CSF, enabling fewer numbers of administration with a lower dose.